

TABLE 3
TIER 1 GROUNDWATER RBSLs AND STANDARDS

This table applies to groundwater and consists of WQB-7 Human Health Standards (HHSs), where available. For compounds without WQB-7 HHSs, DEQ has developed RBSLs and included them in the table. Surface water impacts require a minimum of a Tier 2 evaluation.

Chemical	Effect	Basis	Groundwater Standard or RBSL (µg/l)
For Gasoline and Light Hydrocarbons measured using the Massachusetts Method for Volatile Petroleum Hydrocarbons (VPH)			
C5-C8 Aliphatics	n	rb	400
C9-C12 Aliphatics	n	rb	400
C9-C10 Aromatics	n	rb	50
MTBE	n	hhs	30
Benzene	c	hhs	5
Toluene	n	hhs	1,000
Ethylbenzene	n	hhs	700
Xylenes	n	hhs	10,000
Naphthalene	n	hhs	100
For Diesel and Heavy Hydrocarbons measured using the Massachusetts Method for Extractable Petroleum Hydrocarbons (EPH)			
C9-C18 Aliphatics	n	rb	400
C19-C36 Aliphatics	n	bu	1,000
C11-C22 Aromatics	n	pql	300
Acenaphthene	n	hhs	420
Anthracene	n	hhs	2,100
Benz(a)anthracene	c	hhs	0.48*
Benzo(a)pyrene	c	hhs	0.048*
Benzo(b)fluoranthene	c	hhs	0.48*
Benzo(k)fluoranthene	c	hhs	4.79
Chrysene	c	hhs	48
Dibenzo(a,h)anthracene	c	hhs	0.048*
Fluoranthene	n	hhs	280
Fluorene	n	hhs	280
Indeno(1,2,3-cd)pyrene	c	hhs	0.044*
Naphthalene	n	hhs	100
Pyrene	n	hhs	960

Notes:

Effect is either: n = non-carcinogenic and direct contact RBSLs are based on a hazard quotient of 1, or
c = carcinogenic and direct contact RBSLs are based on a cancer risk 1×10^{-5} .

Basis is: rb = risk-based screening level;
hhs = WQB-7 Human Health Standard; or
pql = the risk-based RBSL of 50 µg/L is lower than the reasonably achievable practical quantitation limit of 300 µg/L
bu = adversely affects beneficial uses (foul taste or odor).
* = The best achievable practical quantitation limit (10 µg/L) may be greater than the RBSL; therefore, if the compound is detected, additional evaluation may be necessary.

DEQ's RBCA policy includes a ceiling concentration of 1,000 µg/l total petroleum hydrocarbons.